

B.Sc. Semester - 5 (CBCS) Examination
Oct/Nov - 2024 (NEW COURSE)
Biology of Seed Plants(Core)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1(A) Answer very shortly. (04)
1. What is the primary characteristic that distinguishes angiosperms from other plant groups?
 2. Define the term "taxon."
 3. What is the role of genus in Biological Classification?
 4. Which taxonomic category is broader: Family or Genus?
- Que.1(B) Answer shortly. (Any one) (03)
1. What are the different taxonomic categories used in the classification of Organisms? Explain any two categories with an example.
 2. How concept of genus and species categories are used to classify Plants? and give its significance in Binomial Nomenclature.
- Que.1(C) Answer in detail. (any one) (07)
1. Describe the origin and evolution of Angiosperms, highlighting the key features that distinguish them from Gymnosperms.
 2. Compare and contrast the classification systems of Bentham and Hooker with that of Engler and Prantl. What are the key differences in their approaches to plant classification?
- Que.2(A) Answer very shortly. (04)
1. Which family within Polypetalae is known for having species with Aromatic Properties?
 2. What is a key distinguishing feature of the Cucurbitaceae Family?
 3. Which family includes plants that are primarily climbers with Tendrils?
 4. In which family are the Sepals and Petals typically found in multiples of four or five?
- Que.2(B) Answer shortly. (Any one) (03)
1. Examine the floral structure of the Cucurbitaceae Family, with examples of economically important species.
 2. Describe the major characteristics of the Capparidaceae Family and explain its significance in various Ecosystems.
- Que.2(C) Answer in detail. (Any one) (07)
1. Discuss the key morphological characteristics of the Annonaceae family, including details on flower structure, fruit type, and economic importance.
 2. Analyze the significance of the Tiliaceae Family in traditional medicine and industry, focusing on the properties of its key species.
- Que.3(A) Answer very shortly. (04)
1. Which family within Gamopetalae is the largest and most diverse among Flowering Plants?
 2. What is a key characteristic of the Asclepiadaceae Family regarding its Flowers?
 3. Which family includes plants known for producing Alkaloids, some of which have Medicinal and Toxic Properties?
 4. What is the common growth habit of plants in the Convolvulaceae Family?

- Que.3(B) Answer shortly. (Any one) (03)
1. Discuss the key morphological features and ecological significance of the Asteraceae Family.
 2. Analyze the medicinal and toxic properties of plants in the Solanaceae Family, with examples of both beneficial and harmful species.
- Que.3(C) Answer in detail. (Any one) (07)
1. Compare the floral structure and reproductive strategies of the Convolvulaceae and Bignoneaceae Families, highlighting their similarities and differences.
 2. Discuss the economic importance of the Asteraceae and Solanaceae Families in Agriculture and Horticulture, providing examples of key crops and ornamental plants.
- Que.4(A) Answer very shortly. (04)
1. What is the primary function of endosperm in Seed Development?
 2. What differentiates Monocotyledonous Embryos from Dicotyledonous Embryos?
 3. What is Polyembryony?
 4. What is a common application of Embryo Culture?
- Que.4(B) Answer shortly. (Any One) (03)
1. Explain the methods and significance of embryo culture in Plant Biotechnology. How does this technique contribute to advances in Agriculture and Horticulture?
 2. Discuss the Phenomenon of Polyembryony. What are the different types of Polyembryony, and how do they affect Seed Development and Plant Propagation?
- Que.4(C) Answer in detail. (Any one) (07)
1. Describe the process of Endosperm Development and its different types. Discuss its role in the nourishment of the Developing Embryo.
 2. Compare and contrast the development of embryos in Monocotyledons and Dicotyledons, including the key morphological differences observed during their development.
- Que.5(A) Answer very shortly. (04)
1. What is the primary active compound found in Tea Leaves?
 2. Which part of the coffee plant is used to Produce Coffee?
 3. What is the main toxic substance found in Tobacco?
 4. Name one plant that is a major source of Natural Fiber.
- Que.5(B) Answer shortly. (Any one) (03)
1. Write a short note on “Oil seeds plants” as an Economic Plant.
 2. Write a short note on “Fiber yielding plants” as an Economic Plant.
- Que.5(C) Answer in detail. (Any one) (07)
1. Disuss about Tea Plants
 2. Describe Tobacco Plants.
